



---

Water-Data Report 2008

**0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC**

Neuse Basin  
Upper Neuse Subbasin

LOCATION.--Lat 35°58'43", long 78°37'58" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03020201, at bridge on North Carolina Highway 98, 2.0 mi north of Bayleaf.

DRAINAGE AREA.--704 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1989 to 1995, 2005 to current year.

REMARKS.--Station operated to define water quality as part of a regional surface-water quality assessment. A GC/FID scan for trace organic compounds was performed on samples collected in October 1994 and May 1995. Results may be obtained from the USGS Water Science Center, Raleigh, NC. Samples for nutrient, chlorophyll *a*, and pheophytin *a* analyses were collected through a sampling zone equal to double the secchi disk depth using the depth-integration sampling technique. Prior to October 1, 2005, samples for chlorophyll *a* were analyzed using a high-performance liquid chromatography method.

## Water-Data Report 2008

0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
 Part 1 of 4  
 [Remark codes: <, less than; E, estimated.]

Date	Time	Color, water, filtrd, Pt-Co units (00080)	Sam- pling depth, meters (00098)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Dis- solved oxygen, water, unfiltrd field, std units (00400)	pH, water, unfiltrd field, std units (00095) 25 degC (00095)	Specif- ic conduc- tance, wat unf μS/cm Temp- erature, water, deg C (00010)	Magnes- ium, water, filtrd, mg/L (00925)		
<b>Oct</b>													
04...	1130	25	1.0	.90	762	8.7	105	8.0	114	24.5	32	8.01	2.96
04...	1135	--	4.0	--	762	.4	5	6.8	117	23.3	--	--	--
04...	1140	--	8.0	--	762	.2	2	7.0	188	17.5	--	--	--
<b>Dec</b>													
12...	1115	--	2.2	1.10	--	--	--	--	--	--	--	--	--
12...	1120	40	1.0	--	760	10.2	95	7.3	123	12.1	31	7.67	2.92
12...	1125	--	5.0	--	760	7.2	64	6.9	139	9.8	--	--	--
12...	1130	--	9.0	--	760	6.5	57	6.9	143	9.2	--	--	--
<b>Feb</b>													
11...	1115	--	1.6	.80	--	--	--	--	--	--	--	--	--
11...	1120	25	1.0	--	769	11.2	94	7.3	143	8.2	31	7.49	3.02
11...	1125	--	4.0	--	769	11.1	95	7.3	143	9.2	--	--	--
11...	1130	--	8.0	--	769	10.6	90	7.3	142	9.0	--	--	--
<b>Apr</b>													
09...	1030	--	2.0	1.00	--	--	--	--	--	--	--	--	--
09...	1035	30	1.0	--	764	10.2	101	7.5	127	14.8	29	6.92	2.78
09...	1040	--	6.0	--	764	6.9	67	6.9	126	14.0	--	--	--
09...	1045	--	12.0	--	764	1.4	13	6.7	140	13.2	--	--	--
<b>Jun</b>													
18...	1045	--	2.6	1.30	--	--	--	--	--	--	--	--	--
18...	1050	40	1.0	--	754	7.7	102	7.6	108	29.2	28	6.72	2.68
18...	1055	--	6.0	--	754	.1	1	6.5	118	20.4	--	--	--
18...	1100	--	11.0	--	754	.2	2	6.6	154	15.2	--	--	--
<b>Aug</b>													
19...	1130	--	2.8	1.40	--	--	--	--	--	--	--	--	--
19...	1135	20	1.0	--	760	8.5	109	8.0	105	28.3	27	6.51	2.72
19...	1140	--	5.0	--	760	.1	1	6.7	112	26.6	--	--	--
19...	1145	--	10.0	--	760	.2	2	6.6	164	16.4	--	--	--

## 0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
 Part 2 of 4  
 [Remark codes: <, less than; E, estimated.]

Date	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf infl pt	Bicar- bonate, wat unf infl pt	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, filtrd, mg/L as SiO2 (00945)	Sulfate water, fltrd, mg/L (00945)	Residue on 180degC wat flt (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite, water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
<b>Oct</b>													
04...	2.53	8.80	30	37	8.83	.13	8.20	5.90	66	.69	<.020	<.016	<.002
04...	--	--	--	--	--	--	--	--	--	1.2	.228	<.016	E.001
04...	--	--	--	--	--	--	--	.20	--	3.1	2.06	<.016	.005
<b>Dec</b>													
12...	--	--	--	--	--	--	--	--	--	1.0	.287	.036	E.002
12...	2.84	10.1	32	39	10.2	.14	8.61	7.90	93	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	1.0	.287	.030	E.002
12...	--	--	--	--	--	--	--	12.4	--	1.1	.341	.029	E.002
<b>Feb</b>													
11...	--	--	--	--	--	--	--	--	--	1.0	.188	.176	.004
11...	3.25	14.8	29	35	14.7	.13	7.81	14.2	91	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	.99	.190	.177	.004
11...	--	--	--	--	--	--	--	13.9	--	1.0	.210	.179	.004
<b>Apr</b>													
09...	--	--	18	22	--	--	--	--	--	.73	.023	.143	.004
09...	3.01	12.1	--	--	11.9	E.12	4.18	18.5	79	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	.73	.083	.139	.004
09...	--	--	--	--	--	--	--	17.1	--	1.0	.409	.128	.007
<b>Jun</b>													
18...	--	--	--	--	--	--	--	--	--	.55	<.020	<.016	<.002
18...	2.50	7.86	20	24	8.25	E.10	1.26	12.3	74	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	.62	.081	<.016	<.002
18...	--	--	--	--	--	--	--	7.62	--	1.7	1.18	<.016	E.001
<b>Aug</b>													
19...	--	--	--	--	--	--	--	--	--	.53	<.020	<.016	<.002
19...	2.50	8.02	22.4	27.4	7.97	E.10	2.80	9.59	83	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	.50	E.014	<.016	<.002
19...	--	--	--	--	--	--	--	1.61	--	2.2	1.66	E.013	E.002

## 0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
 Part 3 of 4  
 [Remark codes: <, less than; E, estimated.]

Date	Ortho-phosphate, water, filtrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L as P (00665)	Organic carbon, water, filtrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Chlorophyll a phytoplankton, µg/L (70953)	Pheophytin, µg/L (62360)	Alum-inum, water, unfltrd recoverable, µg/L (01105)	Arsenic water, unfltrd µg/L (01002)	Cadmium water, unfltrd µg/L (01027)	Chromium, water, unfltrd recoverable, µg/L (01034)	Cobalt water, unfltrd µg/L (01037)	Copper, water, unfltrd µg/L (01042)	Iron, water, unfltrd µg/L (01045)
<b>Oct</b>													
04...	<.006	.029	5.9	9.0	23.7	3.9	29	E.58	<.01	<.40	.13	<1.2	102
04...	E.003	.049	--	--	--	--	--	--	--	--	--	--	429
04...	<.006	.065	8.7	--	--	--	--	--	--	--	--	--	17,900
<b>Dec</b>													
12...	<.006	.036	--	--	15.6	7.0	--	--	--	--	--	--	--
12...	--	--	6.0	7.1	--	--	--	--	--	--	--	--	240
12...	<.006	.039	--	--	--	--	--	--	--	--	--	--	267
12...	<.006	.049	6.5	--	--	--	--	--	--	--	--	--	434
<b>Feb</b>													
11...	<.006	.043	--	--	18.7	10.4	--	--	--	--	--	--	--
11...	--	--	6.2	9.0	--	--	--	--	--	--	--	--	256
11...	<.006	.045	--	--	--	--	--	--	--	--	--	--	282
11...	E.003	.041	6.4	--	--	--	--	--	--	--	--	--	302
<b>Apr</b>													
09...	<.006	.041	--	--	40.0	13.1	--	--	--	--	--	--	--
09...	--	--	6.7	11.1	--	--	70	E.44	.02	E.29	.17	1.3	146
09...	<.006	.039	--	--	--	--	--	--	--	--	--	--	167
09...	<.006	.047	6.1	--	--	--	--	--	--	--	--	--	369
<b>Jun</b>													
18...	<.006	.024	--	--	12.9	5.2	--	--	--	--	--	--	--
18...	--	--	8.7	10.0	--	--	--	--	--	--	--	--	88
18...	<.006	.033	--	--	--	--	--	--	--	--	--	--	1,020
18...	E.006	.045	8.2	--	--	--	--	--	--	--	--	--	3,730
<b>Aug</b>													
19...	E.003	.021	--	--	13.0	3.9	--	--	--	--	--	--	--
19...	--	--	7.8	9.2	--	--	--	--	--	--	--	--	59
19...	E.003	.027	--	--	--	--	--	--	--	--	--	--	132
19...	.008	.043	8.2	--	--	--	--	--	--	--	--	--	6,940

## 0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
 Part 4 of 4  
 [Remark codes: <, less than; E, estimated.]

Date	Mangan- Lead, water, unfltrd recover -able,  μg/L (01051)	Manganese, water, unfltrd recover -able,  μg/L (01055)	Mercury Mercury water, unfltrd recover -able,  μg/L (71890)	Molyb- denum, water, unfltrd recover -able,  μg/L (71900)	Nickel, water, unfltrd recover -able,  μg/L (01062)	Selen- ium, water, unfltrd recover -able,  μg/L (01067)	Silver, water, unfltrd recover -able,  μg/L (01147)	Zinc, water, unfltrd recover -able,  μg/L (01077)	Zinc, water, unfltrd recover -able,  μg/L (01092)
<b>Oct</b>									
04...	E.06	134	.012	.016	.6	.52	.17	<.02	<2.0
04...	--	1,320	--	--	--	--	--	--	--
04...	--	3,570	<.010	<.010	--	--	--	--	--
<b>Dec</b>									
12...	--	--	--	--	--	--	--	--	--
12...	--	136	<.010	<.010	--	--	--	--	--
12...	--	146	--	--	--	--	--	--	--
12...	--	224	<.010	<.010	--	--	--	--	--
<b>Feb</b>									
11...	--	--	--	--	--	--	--	--	--
11...	--	88.4	<.010	<.010	--	--	--	--	--
11...	--	95.5	--	--	--	--	--	--	--
11...	--	104	<.010	<.010	--	--	--	--	--
<b>Apr</b>									
09...	--	--	--	--	--	--	--	--	--
09...	.14	62.5	<.010	<.010	.4	.89	.17	<.02	E1.2
09...	--	69.1	--	--	--	--	--	--	--
09...	--	613	<.010	<.010	--	--	--	--	--
<b>Jun</b>									
18...	--	--	--	--	--	--	--	--	--
18...	--	34.2	.015	.034	--	--	--	--	--
18...	--	677	--	--	--	--	--	--	--
18...	--	1,770	<.010	E.010	--	--	--	--	--
<b>Aug</b>									
19...	--	--	--	--	--	--	--	--	--
19...	--	39.6	E.006	.018	--	--	--	--	--
19...	--	704	--	--	--	--	--	--	--
19...	--	2,230	<.010	.020	--	--	--	--	--